WHAT IS CLAIMED IS:

1. A supporting structure of a vehicle power source comprising:

a plurality of mount members with elasticity through which a power source is mounted on a vehicle body;

first mount members for primarily sharing the weight of the power source and at least one of the first mount members, which is supported by said vehicle body at a first height lower than the height of gravity center of said power source, is attached to a sub-frame; and

second mount members for secondarily sharing the weight of the power source and the second mount members, which have a spring effect in at least one of longitudinal and lateral directions of said vehicle body, are attached to the vehicle body at a second height higher than the gravity center of said power source,

wherein the height of elasticity center of the structure defined by the first and second mount members is set to be higher than the gravity center of said power source.

2. A supporting structure of a vehicle power source according to claim1, wherein said power source comprises an engine, a crank shaft which is disposed in the lateral direction, and a transmission is connected to one end of the crank shaft, wherein said first members comprise a front mount disposed at a front side of said engine and a rear mount disposed at a back side of the engine, and wherein said second members comprise a side engine mount disposed at an end opposite to said transmission and a trans-upper mount disposed on the transmission.

3. A supporting structure of a vehicle power source according to claim1, wherein said spring effect of said second members is adapted to be softer in

a vertical direction than one of longitudinal and lateral directions.

4. A supporting structure of a vehicle power source according to claim1, wherein said sub-frame is supported under body side frames through floating mounts comprising bolts and buffer members.